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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,972

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EXAMINER

ISSING, GREGORY C

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,972	<b>Applicant(s)</b> SARNO ET AL.	
	<b>Examiner</b> Gregory C. Issing	<b>Art Unit</b> 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. In claim 1, “the atmosphere” lacks a proper antecedent basis.

4. Claim 1 recites “*means for determining respective relative time differences of arrival*” between receivers and “*correcting means*”. Moreover, claim 4 recites that the “*correcting means*” includes the measurement of arrival time differences between pairs of receivers. It remains unclear that the claim comprises two separate means for carrying out the measurement of time differences of arrival of a signal between pairs of receivers. Furthermore, there is no definite distinction between the “*means for estimating a position*” of the emitter from the respective relative time differences as set forth as part of the “*means for determining . . . and estimating*” in claim 1 and the same function as defined by the “*correcting means*” of claim 4.

5. The language “to predict actual path length” remains indefinite in light of the lack of clarity associated with the terminology of a prediction of an actual value and is not addressed.

6. The applicant alleges that in claim 4, step b), the language “assuming straight-line paths, obtain an estimate of emitter position” does not specify “that emitter position is estimated from an assumption of straight line paths” as the Examiner contends. Such an argument results in further confusion since the applicant's argument appears to directly contradict the language of the claim and obfuscates the prosecution history.

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***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (*Localization of Target Tracking and Navigation by Correcting Atmospheric Effects*) in view of Minter et al (6,407,703).

9. The rejection is set forth in the previous Office Action.

10. Applicant argues that Choi et al fails to disclose an apparatus for locating an electromagnetic wave emitter including a plurality of receivers, the determining and estimating means and the correcting means. Additionally, the applicant alleges that Choi et al fail to address the use of airborne platforms. Lastly, applicant alleges that there is nothing to suggest that Minter et al includes either the particular arrival time difference determining and emitter position estimating means or the particular correcting means for correcting path length discrepancies caused by the atmosphere. In effect, the applicant alleges that the primary reference fails to disclose any of the claimed limitations. Moreover, the secondary reference to Minter et al allegedly fails to suggest the particular time difference determining and emitter position estimating means or the correcting means.

11. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

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12. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant fails to show non-obviousness over the combination of references.

13. Contrary to the applicant's belief, Choi et al do disclose a plurality of receivers for measuring the time of arrival of a signal from an emitter, determining respective time differences of arrival (at least, p. 1711, col 2, II Localization Measure with Troposphere Delay) and the determination of a position estimation (at least p. 1712, col. 1). Additionally, Choi et al recognize and correct the time delay measurements due to the refractive variation of the atmosphere (at least p. 1712, col. 2, III. Analysis Result) through refractive profiles or ray-tracing algorithms. Thus, the applicant's arguments with respect to Choi et al are not convincing and fail to overcome the rejection. Moreover, the combination of Minter et al makes obvious the use of a plurality of airborne platforms to localize the position of an emitter of electromagnetic waves. Lastly, it is noted that the claims as written do not require the use of any corrected times of arrival in the determination of the relative time differences of arrival nor in the estimation of position.

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al in view of either one of Choi (*Performance Comparison of Tropospheric Propagation Model: Ray Trace Analysis Results Using Worldwide Tropospheric Databases*) or Blake (*Ray Height Computation for a Continuous Non-Linear Atmospheric Refraction-Index Profile*).

15. The rejection is set forth in the previous Office Action.

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16. Applicant's argument that the secondary references fail to suggest further modifying the Choi et al atmospheric correction for use with an apparatus fails to comply with 37 CFR 1.111(b) because it amounts to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

17. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

18. The rejection is thus maintained.

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (571)-272-6973.

The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory C. Issing/  
Primary Examiner  
Art Unit 3662

gci